

Electronic Filing System (EFS) Data Electronic Patent Application Submission USPTO Use Only

EFS ID:

52999.

Application ID:

10707340

Title of Invention:

USING AMMONIA

First Named Inventor:

Joanna Duncan

Domestic/Foreign Application:

Domestic Application

NOx, Hg, AND SO2 REMOVAL

Filing Date:

2003-12-05

Effective Receipt Date:

2003-12-31

Submission Type:

Information Disclosure

Statement

Filing Type:

Confirmation number:

1339

Attorney Docket Number:

AL.US.16

Total Fees Authorized:

Digital Certificate Holder: cn=Phillip E. Decker,ou=Registered Attorneys,ou=Patent and Trademark

Office,ou=Department of Commerce,o=U.S. Government,c=US

Certificate Message Digest: fd52ebea99b059be83b01fe9e3edee8bb40916c3

TRANSMITTAL

Stylesheet Version v1.1.0

Title of Invention

NOx, Hg, AND SO2 REMOVAL USING AMMONIA

Application Number:

10/707340

Date:

2003-12-05

First Named Applicant:

Joanna L. Duncan

Confirmation Number:

1339

Attorney Docket Number: AL.US.16

I hereby certify that the use of this system is for OFFICIAL correspondence between patent applicants or their representatives and the USPTO. Fraudulent or other use besides the filing of official correspondence by authorized parties is strictly prohibited, and subject to a fine and/or imprisonment under applicable law.

I, the undersigned, certify that I have viewed a display of document(s) being electronically submitted to the United States Patent and Trademark Office, using either the USPTO provided style sheet or software, and that this is the document(s) I intend for initiation or further prosecution of a patent application noted in the submission. This document(s) will become part of the official electronic record at the USPTO.

Submitted by:	Elec. Sign.	Sign. Capacity
Phillip E. Decker Registered Number: 39163	Phillip E. Decker	Attorney

Documents being submitted

Files

us-ids

al16ids-usidst.xml

us-ids.dtd

us-ids.xsl

Comments



ELECTRONIC INFORMATION DISCLOSURE STATEMENT

TRADElectronic Version v18

Stylesheet Version v18.0

Title of Invention

NOx, Hg, AND SO2 REMOVAL USING AMMONIA

Application Number:

10/707340

Confirmation Number:

1339

First Named Applicant:

Joanna Duncan

Attorney Docket Number: AL.US.16

Search string:

(4028071 or 4029482 or 4029739 or 4035470

or 4120671 or 4155726 or 4193774 or 4345916 or 4435260 or 4650555 or 4690807 or 4726940 or 4735927 or 4735930 or 4806320 or 4892718 or 4971777 or 5023063 or 5176888 or 5229091 or 5308385 or 5362458 or 5547648 or 5624649 or 5658547 or 5715764 or 5792238 or 5846301 or 5871703 or 6063352 or 6117403 or 6132692 or 6159440 or 6168709 or 6183708 or 6193934

or 6221325 or 6277343 or 6277344 or 6284022 or 6312505 or 6302945 or 5695616 or 5525317 or 5041271 or 6471926 or 6530978).pn.

US Patent Documents

Note: Applicant is not required to submit a paper copy of cited US Patent Documents

init	Cite.No.	Patent No.	Date	Patentee	Kind	Class	Subclass
	1	4028071	1977-06-07	Langlois			
	2	4029482	1977-06-14	Postma et al.			
	3	4029739	1977-06-14	Senjo et al.			
	4	4035470	1977-07-12	Senjo et al.			
	5	4120671	1978-10-17	Steinmeyer			
	6	4155726	1979-05-22	Steinmeyer			
	7	4193774	1980-03-18	Pilat			
	8	4345916	1982-08-24	Richards et al.			
	9	4435260	1984-03-06	Koichi et al.			
	10	4650555	1987-03-17	Rzad et al.			
	11	4690807	1987-09-01	Saleem			

13	12	4726940	1988-02-23	Kobayashi		•	
14] [
15] []					
16] [
17 4971777 1990-11-20 Firnhaber et al. 18 5023063 1991-06-11 Stiles 19 5176888 1993-01-05 Stiles 20 5229091 1993-07-20 Buchanan et al. 21 5308385 1994-05-03 Winn 22 5362458 1994-11-08 Saleem et al. 23 5547648 1996-08-20 Buchanan et al. 24 5624649 1997-04-29 Gal 25 5658547 1997-08-19 Michalak et al. 26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter] []				-	
18] []					
19) []					
20 5229091 1993-07-20 Buchanan et al.)					
21 5308385 1994-05-03 Winn 22 5362458 1994-11-08 Saleem et al.		<u> </u>					
22 5362458 1994-11-08 Saleem et al. 23 5547648 1996-08-20 Buchanan et al. 24 5624649 1997-04-29 Gal 25 5658547 1997-08-19 Michalak et al. 26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-10-16 McQuigg et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al.] []					
23 5547648 1996-08-20 Buchanan et al. 24 5624649 1997-04-29 Gal 25 5658547 1997-08-19 Michalak et al. 26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 39 6277344 2001-08-21 Hei et al. B1)					
24 5624649 1997-04-29 Gal 25 5658547 1997-08-19 Michalak et al. 26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 616940 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 39 6277343 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 </td <td></td> <td><u> </u></td> <td></td> <td></td> <td></td> <td></td> <td></td>		<u> </u>					
25 5658547 1997-08-19 Michalak et al. 26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 39 6277343 2001-08-21 Gansley et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et							
26 5715764 1998-02-10 Lyngfelt et al. 27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 39 6277343 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16] <u> </u>					
27 5792238 1998-08-11 Johnson et al. 28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1		l [
28 5846301 1998-12-08 Johnson et al. 29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>							
29 5871703 1999-02-16 Alix et al. 30 6063352 2000-05-16 Risse et al. 31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.		}		Johnson et al.			
31 6117403 2000-09-12 Alix et al. 32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	29	5871703	1999-02-16	Alix et al.			
32 6132692 2000-10-17 Alix et al. 33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	30 .	6063352	2000-05-16	Risse et al.			
33 6159440 2000-12-12 Schoubye 34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	31	6117403	2000-09-12	Alix et al.			
34 6168709 2001-01-02 Etter B1 35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	32	6132692	2000-10-17	Alix et al.			
35 6183708 2001-02-06 Hei et al. B1 36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	33	6159440	2000-12-12	Schoubye			
36 6193934 2001-02-27 Yang B1 37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	34	6168709	2001-01-02	Etter	B1		
37 6221325 2001-04-24 Brown et al. B1 38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	35	6183708	2001-02-06	Hei et al.	B1		
38 6277343 2001-08-21 Gansley et al. B1 39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	36	6193934	2001-02-27	Yang	B1		
39 6277344 2001-08-21 Hei et al. B1 40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	37	6221325	2001-04-24	Brown et al.	B1		
40 6284022 2001-09-04 Sachweh et al. B1 41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	38	6277343	2001-08-21	Gansley et al.	B1		
41 6312505 2001-11-06 McQuigg et al. B1 42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	39	6277344	2001-08-21	Hei et al.	B1		
42 6302945 2001-10-16 Altman et al. B1 43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	40	6284022	2001-09-04	Sachweh et al.	B1		
43 5695616 1997-12-09 Helfritch et al. 44 5525317 1996-06-11 Bhat et al.	41	6312505	2001-11-06	McQuigg et al.	B1		•
44 5525317 1996-06-11 Bhat et al.	42	6302945	2001-10-16	Altman et al.	B1		
	43	5695616	1997-12-09	Helfritch et al.		•	
45 5041271 1991-08-20 Aoki et al. 423 235	44	5525317	1996-06-11	Bhat et al.			
<u> </u>	45	5041271	1991-08-20	Aoki et al.	,	423	235
46 6471926 2002-10-29 Sander B2 423 237	46	6471926	2002-10-29	Sander	B2	423	237
47 6530978 2003-03-11 McQuigg et al. B2 95 218	47	6530978	2003-03-11	McQuigg et al.	B2	95	218

Signature	
Examiner Name	Date

APP_ID=10707340 page 3 of 3